

NOTES ON THE GENUS *CHAETOGONOPTERON* FROM GUANGXI, CHINA (DIPTERA: DOLICHOPODIDAE)¹

Lili Zhang², Ding Yang³, and Kazuhiro Masunaga⁴

ABSTRACT: The genus *Chaetogonopteron* is recorded from Guangxi (China) for the first time with six species. One species is described as new to science: *Chaetogonopteron guangxiense*. A key to the species from Guangxi is presented.

KEY WORDS: Dolichopodidae, *Chaetogonopteron*, new species, Guangxi, China.

The genus *Chaetogonopteron* de Meijere is characterized by the shortened hind basotarsomere (Meuffels and Grootaert, 1987, 1997). The species of the genus *Chaetogonopteron* from China were mainly studied by Yang and Grootaert (1999a, b), Yang and Saigusa (2001), and Yang (2002). In the present paper, the genus *Chaetogonopteron* is recorded from Guangxi for the first time with 6 species, based on the material collected by the second author with sweep net in Guangxi in 2002. Among them one species is described as new to science. The type of new species is deposited in the insect collection of China Agricultural University, Beijing. The following abbreviations are used: acr-acrostichal, ad-anterodorsal, av-anteroventral, d-dorsal, dc-dorsocentral, h-humeral, ih-inner humeral, LI-fore leg, LII-mid leg, LIII-hind leg, npl-notopleural, oc-ocellar, pd-posterodorsal, ph-posthumeral, psa-postalar, pv-posteroventral, sa-supraalar, sut-sutural, v-ventral.

Key to species of *Chaetogonopteron* from Guangxi, China

1. Only hind tarsomere 1 shortened2
Hind tarsomeres 1-2 shortened.....4
2. Acr uniseriate.....3
Acr biseriate; thorax and abdomen largely yellow
.....*C. chaetorum* Grootaert and Meuffels
3. First flagellomere short conical, nearly as long as wide
.....*C. luteicinctum* (Parent)
First flagellomere much elongated.....*C. concavum* Yang and Grootaert

¹ Received on March 14, 2003. Accepted on May 18, 2004.

² Department of Entomology, China Agricultural University, Haidian, Beijing 100094, China. E-mail: toliby@126.com.

³ Department of Entomology, China Agricultural University, Haidian, Beijing 100094, China. E-mail: dingyang@cau.edu.cn or dyangcau@yahoo.com.cn. Corresponding author.

⁴ Lake Biwa Museum, 1091 Oroshimo-cho, Kusatsu-shi, Shiga, 525-0001 Japan. E-mail: moai@lbm.go.jp.

4. Mid tibia without rowed v5
 Mid tibia with rowed v*C. guangxiense* sp. n.
5. Fore tarsomere 5 wholly whitish..... *C. ceratophorum* Yang and Grootaert
 Fore tarsomeres 2-5 whitish with dark dorsal surface
*C. pallipilosum* Yang and Grootaert

***Chaetogonopteron ceratophorum* Yang and Grootaert**

Chaetogonopteron ceratophorum Yang and Grootaert. 1999. Bull. Inst. R. Sci. Nat. Belg. Ent. 69:269. Type locality: Yunnan (Menglun).

Specimens Examined: 11 males, 8 females, Guangxi: Tiane, Buliuhe (300m), 2002. VIII. 9, D. Yang.

Distribution: China (Guangxi, Yunnan).

***Chaetogonopteron chaeturum* Grootaert and Meuffels**

Chaetogonopteron chaeturum Grootaert and Meuffels, 1999. Belg. J. Ent. 1(2): 335. Type locality: Thailand.

Specimen Examined: 1 male, Guangxi: Tiane, Buliuhe (300m), 2002. VIII. 9, D. Yang.

Distribution: China (Guangxi, Yunnan), Thailand.

***Chaetogonopteron concavum* Yang and Grootaert**

Chaetogonopteron concavum Yang and Grootaert, 1999. Bull. Inst. R. Sci. Nat. Belg. Ent. 69:271. Type locality: Yunnan (Menglun).

Specimens Examined: 2 males, Guangxi: Tianlin, Langping (1300m), 2002. VIII. 14, D. Yang.

Distribution: China (Guangxi, Yunnan).

***Chaetogonopteron guangxiense* Zhang, Yang and Masunaga
 NEW SPECIES (Figs 1-4)**

Diagnosis: Antennal scape and pedicel black, first flagellomere blackish. R₄₊₅ and M more or less parallel apically. Male hind tarsomere 2 distinctly longer than tarsomere 1, with a large appendage.

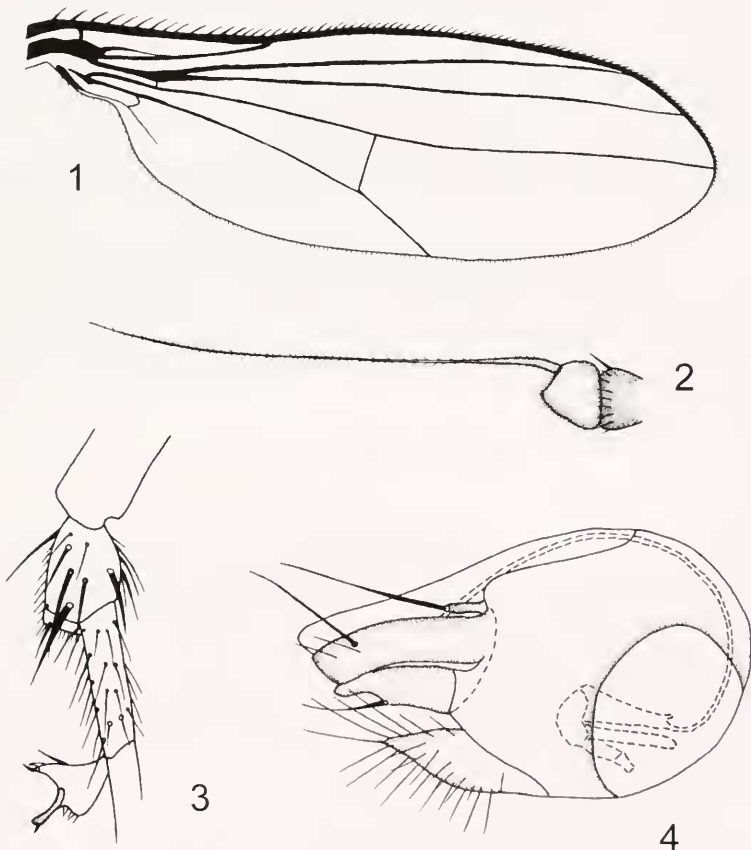
Description: Male. Body length 5.0 mm, wing length 5.3 mm.

Head metallic green with pale gray pollen. Eyes contiguous on face; face distinctly narrower than frons. Hairs and bristles on head black; postocular bristles black, postero-ventral hairs pale. Ocellar tubercle weak, with 2 long oc and 2 short posterior hairs. Antennal scape and pedicel black, first flagellomere blackish, subtriangular, as long as wide; arista subapical, blackish, and short pubescent. Proboscis dark brownish yellow with black hairs; palpus dark brownish yellow with black hairs and 1 black apical bristle.

Thorax yellow with gray pollen; mesonotum brilliant metallic green with anterior and lateral portions yellow; scutellum with a large metallic green basal spot; metanotum metallic green. Pteropleuron and laterotergite each with blackish or black anterior upper corner. Hairs and bristles on thorax black; 5 strong dc, 6-7 irregularly paired acr short and hair-like; 1 long h, 1 long ph, 1 slightly short ih, 1 short su, 1 long anterior and 1 slightly short posterior npl, 1 short anterior and 1 long posterior sa, 1 long psa; scutellum with 1 pair of long bristles and 8 very short marginal hairs. Propleuron

with 2 black hairs and 1 black bristle on lower portion. Metapleuron with 4 black hairs on postero-upper corner and 2 black hairs on antero-lower corner. Legs yellow; mid coxa with black dot on posterior upper corner; tarsomere 5 brown. Hairs and bristles on legs black. Fore coxa apically with 6 weak or strong bristles; mid coxa with 1 weak anterior bristle near apex; hind coxa with 1 outer bristle at base. Fore femur apically with 1 pv; mid femur apically with 1 preapical bristle, 1 weak av and 1 distinct pv; hind femur with one row of 8 ventral bristles, apically with 1 preapical bristle, 1 weak av and 1 distinct pv. Fore tibia apically with 2 bristles; mid tibia with 2 ad, 2 pd and 1 pv, apically with 4 bristles; hind tibia with one row of 10 recumbent v (except narrow base and wide apical portion), apically with 3 bristles. Fore basotarsomere (except basal portion) with one row of 6 rather long av; tarsomeres 2-4 with one row of long hair-like v curved apically. Hind tarsomeres 1-2 shortened, tarsomere 2 distinctly longer than basotarsomere, with a wide ventral appendage. Relative lengths of tibia and 5 tarsomeres LI 3.1 : 1.9 : 1.0 : 0.8 : 0.55 : 0.45; LII 4.8 : 2.9 : 1.5 : 1.15 : 0.6 : 0.45; LIII 5.2 : 0.6 : 0.95 : 1.75 : 1.2 : 0.5. Wing hyaline; veins dark brown, R_{4+5} and M more or less parallel apically; CuAx ratio 0.6. Calyptera dark brown with black hairs. Halter dark yellow with brown knob.

Abdomen yellow with gray pollen; tergum 1 and lateral portion of tergum 2 brownish yellow. Hairs and bristles on abdomen black. Male genitalia chiefly yellow, cercus with pale hairs. Male genitalia (Fig.4); Sternum 8 with 2 bristles; epandrium with 1 strong bristle on finger-like lateral process;



Figs 1-4 *Chaetogonopteron guangxiense* n. sp. (male). 1, Wing; 2, antenna (excluding scape), lateral view; 3, hind tarsomeres 1-2, lateral view; 4, genitalia, lateral view.

surstylus with dorsal lobe more or less acute apically, and ventral lobe rather wide apically; cercus acute apically; hypandrium obtuse apically.

Female. Unknown.

Holotype: Male, Guangxi: Tiane, Buliuhe (300 m), 2002. VIII. 9, D. Yang, deposited in the insect collection of China Agricultural University, Beijing.

Distribution: China (Guangxi).

Etymology: The species is named after the type locality Guangxi, China.

Remarks: The new species is somewhat similar to *Chaetogonopteron seriatum* Yang and Grootaert from Yunnan, but may be separated from the latter by the postocular bristles wholly black and antenna black with blackish first flagellomere. In *minutum*, the middle and lower postocular bristles are pale, and the antenna is yellow with first flagellomere black (Yang and Grootaert, 1999b).

Chaetogonopteron luteicinctum (Parent)

Sympycnus luteicinctus Parent, 1926. *Encycl. Ent. (B II) Dipt.*, 3:134. Type locality: Shanghai (Zi-Ka-Wei).

Specimens Examined: 5 males, Guangxi: Tiane, Bojie (1100 m), 3 August, 2002, leg. D. Yang; 16 males 12 females, Guangxi: Tianlin, Langping (1300m), 14 August, 2002, leg. D. Yang.

Distribution: China (Guangxi, Yunnan, Shanghai, Zhejiang, Fujian, Henan).

Chaetogonopteron pallipilosum Yang and Grootaert

Chaetogonopteron pallipilosum Yang and Grootaert, 1999. *Bull. Inst. R. Sci. Nat. Belg. Ent.* 69:274. Type locality: Yunnan (Jinghong, Mengyang).

Specimen Examined: 1 male, Guangxi: Tiane, Buliuhe (300 m), 9 August, 2002, leg. D. Yang.

Distribution: China (Guangxi, Yunnan).

DISCUSSION

Guangxi, with a tropical or subtropical climate, faunistically belongs to South China of the Oriental biogeographic realm. Six species of *Chaetogonopteron* are now known to occur in Guangxi. One species is endemic to Guangxi, four species are distributed also in South West China of Oriental realm, and one species is widely distributed also in Central China, South West China and other areas of south China. It is obvious that the specific composition of *Chaetogonopteron* from Guangxi has the close relationship with that of southwestern China.

ACKNOWLEDGEMENTS

We are very grateful to Dr. H. Ulrich (Bonn, Germany) and Dr. P. Grootaert (Institut Royal des Sciences Naturelles, Brussels, Belgium) for their kind help. Author DY wishes to express his sincere thanks to Professor Guofang Jiang (Nanjing Normal University, Nanjing) for his kind help during the survey to Guangxi in 2002. The research is supported by the National Natural Science Foundation of China (No. 30225009).

LITERATURE CITED

- Grootaert, P. and H. J. G. Meuffels.** 1999. Description of *Chaetogonopteron chaeturum* sp. n., a very common dolichopodid fly from South Thailand (Insect Diptera Dolichopodidae). Belgian Journal of Entomology 1(2): 335-341.
- Meuffels, H. J. G. and P. Grootaert.** 1987. Dolichopodidae (Diptera) from Papua New Guinea VI: New species in the genus *Sympycenus* Loew, 1857. Indo-Malayan Zoology 4: 317-397.
- Meuffels, H. J. G. and P. Grootaert.** 1997. Dolichopodidae (Diptera) from Papua New Guinea XVI. *Scotiomyia* gen. nov. a new Sympycenine genus from the rain forest with notes on the Papuan Sympyceninae. Studia Dipterologica 4(1):247-255.
- Parent, O.** 1926. Dolichopodides nouveaux de l'extreme orient palearectique. Encyclopedie Entomologique (B II) Diptera 3:111-149.
- Yang, D.** 2002. Diptera: Therevidae, Dolichopodidae. pp. 741-749. *In*, Huang, F. (Editor). Forest insects of Hainan. Science Press, Beijing, China. 1064 pp.
- Yang, D. and P. Grootaert.** 1999a. New and little known species of Dolichopodidae from China (V). Bulletin de l'Institut Royal des Sciences Naturelles de Belgique, Entomologie 69:215-232.
- Yang, D. and P. Grootaert.** 1999b. Dolichopodidae (Diptera: Empidoidea) from Xishuangbanna (China, Yunnan province): the Dolichopodinae and the genus *Chaetogonopteron* (I). Bulletin de l'Institut Royal des Sciences Naturelles de Belgique, Entomologie 69:251-277.
- Yang, D. and T. Saigusa.** 2001. New species of Sympyceninae and Diaphorinae from Yunnan, Southwest China (Empidoidea: Dolichopodidae). Studia Dipterologica 8(2):505-520.